



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/622,132	10/02/2000	Martin Rau	R.34873	9092

2119 7590 12/06/2001

RONALD E. GREIGG
GREIGG & GREIGG P.L.L.C.
1423 POWHATAN STREET, UNIT ONE
ALEXANDRIA, VA 22314

EXAMINER

DINH, TUAN T

ART UNIT PAPER NUMBER

2841

DATE MAILED: 12/06/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/622,132

Applicant(s)

RAU ET AL.

Examiner

Tuan T Dinh

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 22-24, lines 1-2, it is unclear. The phrase of "the component board...remote from the assembly side..." is not understood. Does the component board be able to remote each component on board?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 11-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Arai et al. (U. S. Patent 6,040,985).

As to claims 11, and 22-24, Arai discloses an electronic control unit as shown in figures 1-11 comprising

a component board (P-figure 1, column 2, line 66) on an assembly side (10, 20, column 2, lines 66-67) of which a plurality of electronic modules (80, 81, 83, 85-86-

figure 5, column 4, lines 27, 31, and 57), are provided with a separate electrical control circuit (PLD, switching device, memories);

an electrical control circuit of an electronic module generates at least one control function; and

a plurality of connector parts (40, column 3, line 12, column 4, line 52) are provided with contact elements (41, column 3, line 15) which are disposed separately on the assembly side (10, 20) of the component board (P), and each electronic module (80, 81, 83, or 85-86) is assigned at least one connector part (40), which is disposed on the component board (P) in a vicinity of each respective electronic module and is electrically conductively connected to each respective electronic module via line connections (81a-see circuitry in figures 6-7) mounted on the component board (P).

As to claim 12, Arai discloses the electronic control unit as shown in figures 5-7 in which the connector parts (40) are embodied, connected to the connecting lines of the operating devices (see figures 6-7), which counterpart connectors (not shown) being plugged into the connector parts (40) perpendicular to the assembly side (10, 20) of the component board (P).

As to claim 13, Arai discloses the electronic control unit as shown in figures 1-11 in which the connector parts (40) are surface-mounted components (SMDs), and that the contact elements (41) of the connector parts are soldered, by their end portions facing toward the assembly side (10, 20) of the component board (P), to the line connections (circuitry-figure 6) of the component board (P).

As to claims 14-16, Arai discloses the electronic control unit as shown in figures 1-7 in which further line connections (circuitry) are provided on the component board (P), which without an interposition of electrical or electronic components electrically connect at least one contact element (41) of a connector part (40) to another contact element (40) of the same connector part.

As to claim 17, Arai discloses the electronic control unit as shown in figures 1-11 in which electric power components (91-98, column 5, lines 48-49) are mounted directly on the assembly side (10, 20) of the component board (P) and are electrically connected to at least one electronic module and/or at least one connector part (40) via line connections of the component board.

As to claim 18, Arai discloses the electronic control unit as shown in figure 6 in which a common power supply unit (91-98) for all the electronic modules (80, 81, 83, 85-86) is disposed on the component board (P) and is electrically conductively connected to the electronic modules.

As to claim 19, Arai discloses the electronic control unit as shown in figures 1-11 in which a common signal-processing device (80, column 4, line 27) is disposed on the component board (P) and is electrically conductively connected to the electronic modules (83, 85-86).

As to claim 20, Arai discloses the electronic control unit as shown in figures 5-7 wherein relatively large passive components (81) are mounted directly on the assembly side (10, 20) of the component board (P) and are electrically conductively connected to the electronic modules (80) via line connections (81a) of the component board.

As to claim 21, Arai discloses the electronic control unit as shown in figures 5-7 wherein the electrical control circuit (83) of an electronic module includes at least one microprocessor (61) for each separate electronic module.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tam, Maue et al., and Rolls et al. disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 703-308-3301. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-308-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD
November 28, 2001


Jayprakash N. Gandhi
Primary Examiner
Technology Center 2800